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| SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402-0938 | | | TRUJILLO, JAMES K | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2116 | |

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,205

Applicant(s)

BRABENAC, CHARLES L.

Examiner

James K. Trujillo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,5,9,12,13 and 15-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,5,9,12,13 and 15-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Remarks and Amendment dated 3/30/05.
2. Claims 2, 5, 9, 12-13, 15-38 are presented for examination.

Claim Objections

3. Claims 5, 9, 15, 19, 25 objected to because of the following informalities:
 - a. Regarding claim 5, “the host” on line 3 of the claim should be changed to “a host” for purposes of clarity.
 - b. Regarding claim 9, “the host” on line 5 of the claim should be changed to “a host” for purposes of clarity.
 - c. Regarding claim 15, the host” on line 3 of the claim should be changed to “a host” for purposes of clarity.
 - d. Regarding claim 19, “the host” on line 5 of the claim should be changed to “a host” for purposes of clarity.
 - e. Regarding claim 5, “the host” on line 3 of the claim should be changed to “a host” for purposes of clarity.

Appropriate correction is required.

4. The rejections with respect to claims 2, 12, 13, 23, 24, 29 are respectfully maintained and reproduced infra for applicant’s convenience.

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5. Applicant's arguments with respect to claims 5, 9, 15-22, 25-28 and 30-38 have been considered but are moot in view of the new ground(s) of rejection necessitated by amendment.
6. All rejections of claim limitations as filed prior to Amendment dated 3/30/05 not argued in their entirety or substantively in the response to the prior Office action have been conceded by Applicant and the rejections are maintained from henceforth.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham-Cumming, Jr., (previously cited, "Graham") in view of McKaughan et al., U.S. Patent 5,802,305 ("McKaughan", previously cited).

9. As to claim 2, Graham teaches a method comprising:
 - a. receiving a packet (raw packet data) at a port filter (packet analysis module 100, figure 3), wherein the packet comprises a port identifier (Destination Port, figures 1 and 2);
 - b. determining whether there is host application associated (application identifier on line 209, figure 3) with the port identifier (also 605, 607 and 611, figure 6 and corresponding text); and

- c. when there is not a host application associated with the port identifier, discarding the packet (623 figure 6, col. 7 lines 51-54 and col. 11 lines 14-19).

Graham does not specifically disclose when there is a host application assigned to the port number, *sending a wake-up message* to a power-managed host computer that is one of a laptop computer and a portable computer operable in either a power-managed state or an operational state.

McKaughan teaches sending a wake-up message to a power-managed host computer that is one of a laptop computer and a portable computer operable in either a power-managed state or an operational state (col. 3 lines 15-23 and col. 10 lines 50- 55). Specifically, McKaughan teaches a computer system similar to that of Graham. The system of McKaughan, like Graham, filters packets based on the port numbers. In McKaughan, if a packet is accepted, it will send a wake-up message to wake up the computer system (figure 4). McKaughan also like Graham teaches that his system is usable in many types of computer environments (col. 10 lines 50-55). McKaughan further teaches that power management in general refers to the ability of powering down a computer or certain devices when they are not being used. McKaughan further teaches that power is restored to the computer or devices when they are required for use (col. 3 lines 24-30). McKaughan implements power management by supplying power only to devices required during packet filtering and acceptance or rejection thereof (power to the network card is maintained, col. 6 line 60 through col. 7 line 9). Thus, McKaughan teaches that power should be conserved in portable and AC powered computer systems and teaches an improved apparatus for doing so in a network environment.

It would have been obvious to one of ordinary skill in the art, having the teachings of Graham and McKaughan before him at the time the invention was made, to modify the system and method disclosed by Graham to include power management as taught by McKaughan to obtain sending a wake-up to a power-managed host computer when there is a host application assigned to the port number. The teachings of McKaughan would suggest to one of ordinary skill that power supplied to the entire computer is not necessary to determine if a host application is associated to a port number of a packet. One of ordinary skill would modify Graham, based on McKaughan teachings, by supplying power to the devices needed by the packet analysis module until a determination of the packet is made. Specifically, power would only need to be supplied to the elements in figure 3. If the packet were to be passed on to the application a wake-up message would be sent to power up the computer so that it may be processed. One of ordinary skill would have made the modification to achieve power conservation in a computer system in a network environment in view of the teachings of McKaughan.

10. As to claim 5, Graham together with McKaughan taught the method according to claim 2 as described above. Graham further teaches receiving information from the host computer and using the information to carry out a determining whether determining whether there is a host application associated with the port number (determines which application is appropriate to handle the packet and the packet is sent to an application for processing, col. 6 lines 18-21 and col. 7 lines 43-45), wherein the information comprises executable instructions (passing the packet to the identified application, col. 12 lines 49-52). It is interpreted that passing the packet to the identified application requires using software. Software contains executable instructions. Further, one of ordinary skill in the art would appreciate that when one the packet is passed to

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the identified application the application would process the packet. Processing the packet with the application also utilizes executable instructions.

11. As to claim 9, Graham together with McKaughan taught the method according to claim 2 as described above. Graham further teaches detecting a port in use by the host application (application to port mapping table, col. 5 line 66 through col. 6 line 1). Graham also teaches selecting information based on the port in use by the host application (application identifier, col. 6 lines 4-10). Finally, Graham teaches sending information to the port filter, wherein the port filter uses the information carry out a determining whether there is a host application associated with the port (determines which application is appropriate to handle the packet and the packet is sent to an application for processing, col. 6 lines 18-21 and col. 7 lines 43-45).

12. As to claims 12-16 and 19-20, Graham together with McKaughan taught the claimed method. Therefore together they also taught the claimed signal-bearing media comprising instructions. Specifically, it appears that claims 12-16 and 19-20 recite the same limitations as those in claim 2-3, 5 and 9. Therefore claims 12-16 and 19-20 are rejected for the same reasons.

13. As to claim 17, Graham together with McKaughan taught the signal-bearing media according to claim 15 as described above. Graham further teaches wherein the information comprises data, wherein the data is to describe the host application (passing the packet to the application requires data that describes the host application, 619 and 710 in figures 6 and 7).

14. As to claim 18, Graham together with McKaughan taught the signal-bearing media according to claim 15 as described above. Graham further teaches wherein the information comprises data, and wherein the data is to describe the port number (col. 10 lines 15-28). The port number is necessary because it is associated with application in Graham.

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15. As to claim 21, Graham together with McKaughan taught the signal-bearing media according to claim 19 as described above. Graham further teaches wherein the information comprises data, wherein the data is to describe the host application (passing the packet to the application requires data that describes the host application, 619 and 710 in figures 6 and 7).

16. As to claim 22, Graham together with McKaughan taught the signal-bearing media according to claim 19 as described above. Graham further teaches wherein the information comprises data, and wherein the data is to describe the port number (col. 10 lines 15-28). The port number is necessary because it is associated with application in Graham.

17. As to claims 23-29, Graham together with McKaughan taught the claimed method and claimed signal-bearing media. Therefore together they also taught the claimed apparatus. Specifically, it appears that claims 23-29 recite the same limitations as those in claim 2-22. Therefore claims 23-29 are therefore rejected for the same reasons.

18. Regarding claim 30, Graham together with McKaughan taught the method according to claim 2, as described above. Graham further teaches sending the packet to the host when there is a host application associated with the port number (Destination Port, figures 1 and 2). Graham together with McKaughan teaches that the host would be power managed.

19. Claims 31-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novoa et al., U.S. 6,493,824 in view of Graham-Cumming, Jr., (previously cited, "Graham").

20. Regarding claims 31 and 33, Novoa teaches an apparatus, comprising:

a. a first stage filter to:

i. receive a packet (detecting a packet col. 4, lines 54-56, col. 9, lines 18-24);

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- ii. interrogate the packet as to whether the packet includes data that matches selected data of a host computer (verifies that the packet destination address matches the destination address of the network interface, col. 4, lines 54-56);
- iii. forward the when the packet includes data that matches selected data of the host computer (to determine a security field, col. 9, lines 34-35); and
- iv. reject the packet when the packet does not include data that matches selected data of the host computer (discarding packet if address does not match, col. 8, lines 25-35).

Novoa teaches using a second filter for security purposes (step 414, col. 9, lines 43-53).

Graham teaches using a filter to receive a packet comprising a port number (Destination Port, figures 1 and 2); determine whether there is a host application associated with the port number (application identifier on line 209, figure 3 and also 605, 607 and 611, figure 6 and match between port numbers of the packet and an application object, col. 10, lines 15-28); and reject the packet when there is not a host application associated with the port number (623, figure 6); wherein the apparatus further is to present the packet to the host computer when there is a host application associated with the port number and when the packet includes data that matches the selected data of the host computer (pass the packet to the application 619, figure 6). The invention of Graham is in the same field of endeavor as that of Novoa in that both inventions are directed toward filtering packet from the network. Graham further teaches that his invention is related to dynamically mapping application and port relationships (col. 2, lines 20-24) and that dynamic ports are frequently used to provide security (col. 1, lines 60-63). Graham further teaches that his invention further provides the advantage of improve accuracy in the detection

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and accounting of traffic data, and the ability to accurately report and manage such traffic (col. 12, line 66 through col. 13, line 5)

It would have been obvious to one of ordinary skill in the art, having the teachings of Novoa and Graham before them at the time the invention was made, to modify the second filter of Novoa to include the filter as taught by Graham.

One of ordinary skill in the art would have been motivated to make the modification in order improve the accuracy in the detection and accounting of traffic and accurately report and manage such traffic. Further, Graham suggests that such a filter would be useful for providing security in such a network system. The invention of Novoa is directed to discriminate in a power down state between authorized wake-up packets and unauthorized wake-up packets (col. 4, lines 30-44). Graham teaches that only packets with a port number having an associated application would be allowed to function on the computer because it has been identified (col. 2, lines 27-34, and col. 11, lines 14-19). That is, in Graham unidentified packets will be discarded. Those of ordinary skill will understand and appreciate that discarding unidentified packets would also increase security.

21. Regarding claim 34, Novoa together with Graham taught the apparatus according to claim 33, as described above. Graham further teaches wherein there is a host application associated with the port number and when the packet includes data that matches the selected data of the host computer (application identifier on line 209, figure 3 and also 605, 607 and 611, figure 6 and match between port numbers of the packet and an application object, col. 10, lines 15-28). Novoa further teaches the apparatus is further to send a wake-up message to the host computer, wherein the host computer is operable in either a power-managed state or an

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operational state (step 416, awaken computer only when security valid, col. 9, lines 44-53). In the case of Novoa together with Graham, security would not be valid unless a match of a packet with a port number with an application associated with the port number is made.

22. Regarding claims 32 and 35, Novoa together with Graham taught the apparatus according to claim 33, as described above. Novoa further teaches wherein the first stage filter includes a pattern filter (wake-up pattern, col. 4, lines 48-57). Graham further teaches wherein the second stage filter includes a port filter (determining if a port number is matched between a packet and an application, col. 10, lines 18-24).

23. Regarding claims 36-38, Novoa together with Graham taught the claimed apparatus, as described above, therefore they also teach the claimed method.

Response to Arguments

24. Applicants argue in substance that there is no motivation to combine Graham and McKaughan to arrive at the present claims. Specifically, applicants argue that Graham and applicant are clearly attempting to solve different problems and therefore seek very different solutions.

Applicant's argument that Graham and Applicant are clearly attempting to solve different problems and therefore seek different solutions is not on point. It appears that applicants are arguing that because Graham does not indicate any attempt to improve computer security and/or reduce power consumption there is no motivation to combine the cited references; however, even if this is true it is not relevant to the question of whether or not there is motivation to combine the references relied upon by the examiner. The examiner has clearly provided motivation to

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combine Graham and McKaughan and the resulting combination renders the claimed invention obvious.

The examiner does not disagree with the applicants with regard to the power consumption. However, that is why reference to McKaughan is made to teach those limitations and motivation for the combination.

As to the argument that Graham does not indicate improving security, it is noted that the feature of security is not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). It appears that the feature of security is an intended use. Such a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). Moreover, it is believed that Graham is indirectly concerned with security in that the dynamic port that are used in Graham are often used for security in a computer system (col. 1, lines 60-62) and that any unidentified packets are discarded (col. 11, lines 14-19).

In response to the applicant's argument that obviousness may not be found where a modification renders a device inoperable because modifying the computer of Graham would render the packet analysis module inoperable. Specifically, the applicants argue that powering

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down the computer of Graham, the software product 304 of Graham would not have power and thus would not operate. However, McKaughan teaches that a network interface card 22 that is powered when the computer is powered down. One of ordinary skill would readily recognize that Graham would be modified to have a network interface as taught by McKaughan in order to enjoy the advantages taught by McKaughan. Specifically, the software of Graham and any necessary hardware would reside in a network interface card that would remain powered when the rest of the computer is powered down. Thus, the combination of Graham and McKaughan would not render the packet analysis module of Graham inoperable.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). As set forth above in the previous paragraph, the reasoning is not improper hindsight reasoning and uses only knowledge within the level of ordinary skill at the time the claimed invention was made.

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James K. Trujillo whose telephone number is (571) 272-3677. The examiner can normally be reached on M-F (7:30 am - 5:00 pm) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James Trujillo
June 8, 2005


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